veloped insects, in their native haunts, while pursuing their occupations in their own way. Biological and behaviour work on the American wasps has been, for the most part, desultory and incomplete, and we hope that these chapters may, in their small way, fill the gap that exists."

Those who are familiar with Fabre's *The Hunting Wasps*, *The Mason Bees*, and other studies of insect life will welcome these investigations as a further contribution to the subject, correcting some of the French observer's conclusions. According to Professor W. M. Wheeler, who writes the Introduction to this volume, Fabre did not sufficiently take into account variations in behavior, being too set in his ways of thinking, and owing to his training as a chemist and mathematician, was prone to stress the scholastic conception of instinct. Inasmuch, however, as the evolution of the solitary wasps, which comprise some 10,000 described species scattered over the torrid and temperate regions of the globe, has extended over a period of at least four to six million years, it is not surprising to discover a great diversity of habits. Thus the authors of this book, avoiding the errors of the "mystery-mongers, the simplicists, and the humanizers," after patiently viewing the behavior of the wasps "in sunny fields for four years" agree with the conclusions of Forel in his study of *The Senses of Insects*: "It must be admitted, therefore, that insects are capable of perceiving, of learning, of recollecting, of associating their recollections and utilizing them to accomplish their ends. They have their various emotions, and their will is not purely instinctive, but offers individual plastic modifications adapted to circumstances."

—

THE GUN BOOK. By Thomas H. McKee. Profusely illustrated. New York: Henry Holt & Company. $1.60 net.

The Preface tells us that "The purpose of this book is to set forth accurately, but in simple words, the essential principles of the gun as a projecting apparatus, illustrating more difficult points by reference to familiar objects." The author, a college graduate with practical experience in handling guns against the Indians and lawless whites of the West, has made careful investigations of the principles of physics, chemistry, and mathe-

matics on which gunnery is based, and furnishes non-technical explanations of the effect of the rifled barrel with its advantages over the smooth bore, gives reasons for using the long, pointed bullet, makes clear the relation between rifling and trajectory, shows how the Maxim silencer works, and answers many questions connected with a gun which any wide-awake boy would like to know or ought to know. Indeed, the whole history of the development of firearms from the battle of Crécy to the modern war is traced, with copious illustrations of the various types invented from age to age. The book is an interesting and valuable treatment of the subject, calculated not to promote militarism but to encourage intelligent sportsmanship.

—

OUR HUMBLE HELPERS. By Jean Henry Fabre. Translated from the French by Florence Constable Bicknell. New York: The Century Company. $2.00 net.

Similar in plan and style to the author's *Story-book of Science*, this volume deals with our friends of the farm-yard,—the pig, the hen, the goose, the turkey, the ox, the ass, the horse, the cow, the sheep, and his canine keeper,—and tells many interesting facts and stories about their origin, domestication, anatomical structure, and habits. Though intended primarily for boys and girls, the book will prove of equal interest and pleasure to their parents.

—

LABORATORY MANUAL FOR INTRODUCTION TO SCIENCE. By Bertha M. Clark. Cincinnati and New York: The American Book Company.

Conveniently arranged with loose leaves for a binder, this paper-covered manual contains more than two hundred experiments that have been successfully used with high school students. Most of these experiments require simple apparatus and can be performed by the average pupil without danger to himself or to others. Each experiment is accompanied by a series of questions designed to make the pupil record every step of the process and understand clearly what he is doing. The list of experiments covers a pretty wide field and is adapted to work both in the rural school and in the city school.